REMARKS/ARGUMENTS

The Invention

The present invention relates generally to implementing a Wireless Access Protocol (WAP) push and specifically to a system and a method for transmitting a Session Initiation Request. The claimed subject matter includes establishing a connection oriented signalling channel over which to send the SIRs. An example of a connection oriented signalling channel is the USSD channel in GSM based networks. This provides a faster delivery of an SIR to the mobile. Furthermore, the problem of backed up SIRs can be avoided as the connection oriented nature of the channel means that if the mobile does not establish a USSD or similar connection, the push application can be notified and stop sending SIRs until a USSD connection can be established. Once an SIR is delivered in this way, the mobile then activates a suitable bearer (e.g., GPRS PDP context) with which to establish the push session. Thus, in the absence of a suitable bearer for SIR signalling, the claimed subject matter provides a connection oriented solution which aims to overcome the above mentioned problems with the connectionless SMS method.

Status of the Claims

Claims 1-5, 7-14, 16-24, and 26-31 are pending in the application.

Prior to amendment, Claims 1, 3-4, 10, 11, 12, 14, 18-19, 20, 23, 28, and 29-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WAP Push Architectural Overview (WAP-250-PUSHARCHOverview-20010703-p), in view of *Lewontin* (U.S. Patent Publication No. 2005/0071419 A1), further in view "Over the Air Over HTTP".

Claims 2, 12, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over PUSHARCH, in view of *Lewontin* (U.S. Patent Publication No. 2005/0071419 A1) and OTAHTTP, as applied to Claims 1, 11 and 20, and further in view of *Livari et al.* (U.S. Patent Publication No. 2005/0020234 A1).

Prior to amendment, Claims 6-8, 15-17 and 25-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over PUSHARCH, as applied to Claims 1, 11 and 20, in view of WAP Over GSM USSD (WAP-204-WAPOverGSMUSSD-20010730-a).

Claim Amendments

In claim 1, the phrase "transmit a session initiation request" has been amended to read "transmit a session initiation request from the push proxy gateway to the mobile station". Similar amendments have been made to claims 20, 29, and 31. The phrase "towards the push proxy gateway" has been moved to appear after the words "for establishing a push session" in claims 1, 11, 20, 29, 30, and 31. Finally, in line 4 of claim 1, the term "a mobile station" has been amended to read "the mobile station".

The recitations of former Claim 6, which depended from Claim 1, have been amended into Claim 1. Further, the recitations of Claims 15 and 25, which are similar to the recitations of Claim 6 have been amended into Claims 11 and 20. Claims 15 and 25 formerly depended from Claims 11 and 20, respectively. Further, recitations similar to the recitations of Claim 6 have been amended into independent Claims 29-31. Accordingly, due to the amendments, the relevant rejections for the independent claims are those rejections applied to Claims 6-8, 15-17 and 25-27.

Further, the recitation "in response to a need to push information from a push proxy gateway to a mobile station" has been added to claims 11, 20, 29, 30, and 31. In addition, the terms "channel" and "request" or "initiation request" have been amended to read "connection-oriented channel" and "session initiation request" throughout these claims. These amendments reflect amendments made to claim 1 in the previous response.

Response to the Examiner's General Response to Claim 1

Initially, however, Applicant will address the Examiner's assertion that it is not clear whether the Push Proxy Gateway, the mobile device, or some other device is the device initiating or sending the SIR signal, Applicant has amended the phrase "transmit a session initiation request", in claim 1, to read "transmit a session initiation request from the push proxy gateway to the mobile station". Applicant notes that the Examiner's assertion that the phrase "the session initiation request being such that the mobile station activates a bearer for establishing a push session in response to the session initiation request towards the push proxy gateway" causes confusion, Applicant has moved the phrase "towards the push proxy

gateway" to appear after the words "for establishing a push session", as suggested by the Examiner.

With regard to the Examiner's objection to the phrase "establishing a connection-oriented signalling channel between the network and the mobile station", Applicant respectfully submits that a person skilled in the art would clearly understand this phrase. The terms "connectionless" and "connection-oriented" are used throughout mobile telecommunications literature. Methods of establishing a connection-oriented signalling channel, as well as the range of connectivity, are known to the person skilled in the art. See, for example, the Wikipedia article titled "Connection-oriented." Attached as Exhibit 1. Therefore, Applicant respectfully submits that the above-referenced phrase is not obscure.

Page 3 of the office action summarizes the Examiner's response to Applicants previous submissions. It appears the Applicant and the Examiner are in agreement on the following facts:

Lewontin:

uses connectionless push to send a SIR;

uses a connection-oriented signalling channel for data.

OTAHTTP: teaches sending an SIR via connection oriented signalling channel <u>if such a channel already exists.</u>

Lewontin is silent on the use of a connection-oriented signalling channel for transmitting an SIR, and more importantly, is silent on the establishment of a connection-oriented channel for that purpose.

The Examiner seems to argue that because Lewontin does not assert the SIR cannot be transmitted via connection-oriented signalling channel, that is equivalent to Lewontin teaching the use of a connection-oriented signalling channel. With all due respect, the fact that Lewontin does not teach that an SIR cannot be transmitted via connection-oriented signalling channel is not equivalent to a teaching that it can be transmitted via connection-

oriented signalling channel. It is well established that the recitations must be taught positively in the reference or references when combined.

The Examiner has argued that one skilled in the art would recognize that transmission of SIR via connection oriented channel can be achieved by combining Lewontin and OTAHTTP. However, Lewontin has not added anything at this point; OTAHTTP teaches that the SIR could be transmitted by connection oriented signalling channel. It is respectfully submitted that this still does not address the recitation of establishing a connection-oriented signalling channel for this purpose.

Claims 1, 3-4, 10, 11, 12, 14, 18-19, 20, 23, 28, and 29-31; Rejected under 35 U.S.C. § 103(a) and Claims 6-8, 15-17 and 25-27; Rejected under 35 U.S.C. § 103(a)

Claims 1, 3-4, 10, 11, 12, 14, 18-19, 20, 23, 28, and 29-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WAP Push Architectural Overview (WAP-250-PUSHARCHOverview-20010703-p)(PUSHARCH) , in view of *Lewontin* (U.S. Patent Publication No. 2005/0071419 A1), further in view "Over the Air Over HTTP". As set forth above, this rejection is no longer relevant due to the amendments and the independent claims shall be addressed by reference to Claims 6, 15, and 25. Further, Claims 6-8, 15-17 and 25-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over PUSHARCH, as applied to Claims 1, 11 and 20, in view of WAP Over GSM USSD (WAP-204-WAPOverGSMUSSD-20010730-a). Given that the independent claims have been amended to include the subject matter of claim 6, it is the Examiner's rejection of Claims 6-8, 15-17, and 25-27, as it applies to the independent claims as amended, that will be considered in detail. Applicant, however, will first address the rejection of Claim 1 without reference to the recitations of Claim 6. Applicant will then address the Claim 1 as amended.

Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection of claim 6 (now claim 1). Applicant will present a rationale for reconsideration and withdrawal based on:

1) the framework set out in *Graham v. John Deere Co.*, 383 U.S. 1, 86 S.Ct. 684, 148 USPQ 459, 461 (1966) which necessitates determining the scope and content of the prior art, ascertaining the differences between the claimed invention and the prior art, and resolving the level of ordinary skill in the pertinent art;

2) the requirement that the Examiner make a searching comparison of all claim recitations (see the BPAI decision *Ex parte H. Garrett Wada, et al.*; BPAI Appeal No. 2007-3733 (January 14, 2008));

3) The requirement for a rational basis for the obviousness rejection as set out in *KSR Int'l v. Teleflex, Inc.,* No. 04-1350, slip op. at 14 (U.S., Apr. 30, 2007) [*KSR*].

1) The Graham Inquiries

(a) The scope and content of the prior art as follows:

It appears the Applicant and the Examiner are in agreement on the scope and content of the prior art to the following extent:

PUSHARCH

sends SIR via connectionless PUSH;

activation of a bearer for the subsequently pushed data.

Lewontin:

uses connectionless push to send a SIR;

uses a connection-oriented signalling channel for subsequently pushed data; the connection-oriented signalling channel may be established for this purpose.

OTAHTTP:

sending an SIR via connection oriented signalling channel <u>if such a channel</u>

already exists;

the network subsequently pushing the data to the mobile station using a connection-oriented channel.

(b) The Examiner and the Applicant are in agreement concerning the following differences between the claimed invention and the prior art

PUSHARCH does not expressly disclose in response to a need to push information from a push proxy gateway to a mobile station, establishing a connection-oriented signalling channel between the network and the mobile station.

The combined teachings of PUSHARCH and Lewontin do not disclose using said connection-oriented signalling channel to transmit a session initiation request *(emphasis added, Examiner's own words)*.

(c)The level of ordinary skill in the pertinent art

Applicant respectfully submits that the Examiner did not properly resolve the level of ordinary skill in the pertinent art. The Examiner has provided no indication what the level of ordinary skill in the art is, and Applicant submits that the ordinary level of skill would not cure to the deficiencies of the prior art discussed above.

2) The Requirement that the Examiner Make a Searching Comparison of All Claim Recitations

The Examiner's duty when considering obviousness is summed up in the BPAI decision *Ex parte H. Garrett Wada, et al.*; BPAI Appeal No. 2007-3733 (January 14, 2008) [Wada] at pp 7 and 8:

> When determining whether a claim is obvious, an examiner must make "a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art." *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, "obviousness requires a suggestion of all

limitations in a claim." [...]

Because the Examiner has not explained why every limitation in claim 1 would have been obvious to a person of ordinary skill in the art, we agree with Appellants that the Examiner has not made out a case of prima facie obviousness.

Applicant respectfully submits that the Examiner has not properly considered every recitation of claim 1. The Examiner asks "Why is that 'the connection-oriented channel [of OTAHTTP] is not established for the purpose of sending the SIR?'" The short answer is that there is nothing in OTAHTTP which suggests that this is the case, and the Examiner has not pointed to anything which so suggests. Having regard to *Wada*, it is not the Applicant's duty to explain why a recitation is not taught by OTAHTTP, but rather the Examiner's duty to explain why OTAHTTP does teach or suggest the recited element. Clearly, the Examiner's question shows that the Examiner has not properly considered every recitation of the present claims.

3) Rational to support a conclusion of obviousness

Once the findings of fact are articulated, an Examiner must provide an explanation to support an obviousness rejection under 35 U.S.C. 103(a). The United States Supreme Court visited the manner by which "obviousness" under 35 U.S.C. §103(a) is to be interpreted in *KSR*. As the Court noted in *KSR*, once the scope of the prior art is ascertained, the content of the prior art must be properly combined. The Court stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *Id.* at 14. Furthermore, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.* at 14 citing *In Re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). For the Patent Office to properly combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have sought to combine the respective

teachings of the applied references. *Id.* at 15.

It is further noted that the requirement for an "articulated reasoning" is not a minor point in *KSR Int'l* that an Examiner may simply ignore. It is noted that the requirement for an "articulated reasoning," or a similar statement, is set forth in no less than three MPEP sections relating to obviousness rejections. *See* MPEP §§ 2141, 2142, and 2143. More specifically, MPEP § 2141 states, "Office personnel **must** therefore ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied. In certain circumstances, it may also be important to include **explicit findings** as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done. **Factual findings** made by Office personnel **are the necessary** underpinnings to establish obviousness. " (Emphasis added). MPEP § 2142 notes that, "[t]he Federal Circuit has stated that '**rejections on obviousness cannot be sustained with mere conclusory statements**; instead, there must be some **articulated reasoning** with some rational underpinning to support the legal conclusion of obviousness.' *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)." (Emphasis added). MPEP § 2143 states, "The **key** to supporting any rejection under 35 U.S.C. 103 **is the clear articulation** of the reason(s) why the claimed invention would have been obvious." (Emphasis added).

With regard to combining known elements of an invention, the Supreme Court further stated that, "[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR International* (Slip Opinion at 14). This holding comports with *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) which held that, although some of the cited references, individually, may have some of the claimed inventions' features, "one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention." *Id.* at 1075. Instead, to reach the proper conclusion under §103:

> The decision maker must step backward in time and into the shoes worn by [a person having ordinary skill in the art] when the invention was unknown and just before it was made. In light of *all* the evidence, the decision maker must then determine whether...the claimed invention as a whole would have been obvious at *that* time to *that* person.

Id. at 1073-74. (emphasis added).

In this Office Action, the Examiner has provided paragraphs identifying elements allegedly (see above) similar to those elements recited in the claims of the present application. Then, with respect to each independent claim, the Examiner provides a single sentence which, in essence, states "it would be obvious to one skilled in the art to combine the references [based on a stated motivation]." Arguments as to the sufficiency of each stated motivation are set forth below.

Applicant asserts that such a single sentence is the exact type of conclusory sentence that *KSR International* and MPEP § 2142 state cannot, by itself, support a rejection under 35 U.S.C. § 103(a). By providing only a single sentence, the Examiner has failed to provide explicit findings (MPEP § 2141) and failed to provide the "key" support for a finding of obviousness (MPEP § 2143). Thus, it appears that the Examiner has merely identified selected elements shown in the prior art and asserted that these elements may be combined. As set forth in *Fine*, this is improper.

Further, it is respectfully submitted that no logical rational to support a conclusion of obviousness can be presented on the basis of the cited references. It is important to realize first that PUSHARH, Lewontin, and OTAHTTP all address the two aspects of a PUSH:

1) a mechanism to send the SIR;

2) a mechanism to subsequently send the push data.

Applicant has conceded previously that the use of connection-oriented channel to send the push data is known. This may, in fact, be established in response to a need to send the data, as in Lewontin. Applicants claim recites the establishment of a bearer, in response to the SIR. The combined teachings are as follows, ignoring for the time being any issues with motivation to combine etc:

the combined teachings regarding a mechanism to send the SIR: this may be sent by a connection-oriented channel – if available, or connectionless push;

the combined teachings regarding sending the push data: a "bearer" may be established in response to the SIR (PUSHARCH), or a connection-oriented channel may be established for this purpose (Lewontin).

Clearly missing from the combined teachings is the establishment of the connection-oriented channel for the purpose of sending the SIR. The fact that Lewontin teaches establishing a connection-oriented channel for data is not relevant. This is the data channel used in the second part of the process, common to all of the references.

It is respectfully submitted that Lewontin teaches away from the establishment and/or use of connection-oriented signalling channel for transmitting the SIR. Why would a person take the teachings of Lewontin, which explicitly teaches sending the SIR via connectionless PUSH, find a later reference in Lewontin to the establishment of a connection-oriented channel for the push data, and conclude you could use that for the SIR as well, contrary to the explicit teaching of the reference? The establishment of a connection oriented channel for data is cumulative to the establishment of a bearer for data as in PUSHARCH.

Claim 1 as amended further includes the subject matter of former claim 6. In the rejection of claim 6, and specifically in paragraph 15 of the Detailed Action, the Examiner stated that "USSD is a well-known bearer service that supports the WAP traffic." The Examiner also stated that "it would have been obvious [...] to combine the teachings of PUSHARCH with the teachings of WAPU by explicitly including bearer services, such as USSD, by avoiding the store-and-forward procedures, to provide the capability for delivering real time services."

A system that implements WAP over USSD, as taught in WAPU, runs contrary to claim 1. Claim 1 recites sending the SIR over USSD; then establishing another bearer, and then the PPG using the thus established bearer to send the PUSH data over another channel. This is contrary to the point of WAPU which is to run the entirety of WAP over USSD.

This includes the WAP Push per se, as opposed to signaling to set up a bearer.

The Examiner conceded that PUSHARCH does not teach "in response to a need to push information from a push proxy gateway to a mobile station, establishing a connection-oriented signalling channel between the network and the mobile station" in paragraph 2 of the Detailed Action. As noted above, in paragraph 15 of the Detailed Action, the Examiner stated that "USSD is a well-known bearer service that supports the WAP traffic." The Examiner also stated that "it would have been obvious [...] to combine the teachings of PUSHARCH with the teachings of WAPU by explicitly including bearer services, such as USSD, by avoiding the store-and-forward procedures, to provide the capability for delivering real time services."

It is unclear what recitation of claim 6 the Examiner is referring to with the statement "avoiding the store-and-forward procedures, to provide the capability for delivering real time services". As mentioned above, the Examiner appears to be incorrectly asserting that "WAP traffic" from WAPU would include the SIR sent over a connection-oriented channel from claim 1 (upon which claim 6 depends). The push data is distinct from an SIR in claim 1. The connection-oriented channel of claim 1 is established to send an SIR from the push proxy server to the mobile station. The SIR is sent before any push data is sent over a bearer. Therefore, there is nothing in WAPU which teaches or suggests "establishing a connection-oriented signalling channel between the network and the mobile station" over which an SIR will be sent.

It is respectfully submitted that the rationale for combining the references provided by the Examiner does not address this, and therefore fails to support the rejection.

In conclusion, Applicant respectfully submits that a valid case for the rejection of claim 1 as amended on the basis of obviousness having regard to OTAHTTP, Lewontin, and PUSHARCH, and WAPU cannot be made. In view of the foregoing, Applicant requests that the Examiner withdraw the obviousness rejection of claim 1.

Amended independent claims 11, 20, 29, 30, and 31 now include similar recitations as independent claim 1. Therefore, Applicant submits that these claims (and claims 12-19,

and 21-28 which depend thereon) are not obvious for the same reasons discussed above. All of the dependent claims should be patentable for the same reasons. Applicant requests that the Examiner withdraw the obviousness rejection of the claims.

In view of the foregoing, early favourable consideration of this application is earnestly solicited.

Claims 2, 12, and 21; Rejected under 35 U.S.C. § 103(a)

Claims 2, 12, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over PUSHARCH, in view of *Lewontin* (U.S. Patent Publication No. 2005/0071419 A1) and OTAHTTP, as applied to Claims 1, 11 and 20, and further in view of *Livari et al.* (U.S. Patent Publication No. 2005/0020234 A1). Claims 2, 12, and 21 rely upon their dependency for patentability.

CONCLUSION

In view of the remarks above, Applicants respectfully submit that the application is in proper form for issuance of a Notice of Allowance and such action is requested at an early date.

Respectfully submitted,

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Connection-oriented

From Wikipedia, the free encyclopedia
(Redirected from Connection oriented)

In telecommunications, **connection-oriented** describes a means of transmitting data in which the devices at the end points use a preliminary protocol to establish an end-to-end connection before any data is sent, and in which data is sent over the same path during the communication. Connection-oriented protocol service are often but not always "reliable" network service, that provides guarantees that data will arrive in the proper sequence.

Circuit mode communication, for example the public telephone network, ISDN and SONET/SDH, are examples of connection-oriented communication.

Packet mode communication may also be connection-oriented, and is called virtual circuit mode communication. A connection-oriented packet switched protocol does not have to provide each packet with routing information (complete source and destination address), but only with a channel/data stream number, often denoted virtual circuit identifier (VCI). Routing information may be provided to the network nodes during the connection establishment phase, where the VCI is defined in tables in each node.

The alternative to connection-oriented transmission is connectionless packet-mode communication, also known as datagram communication, in which data is sent from one end point to another without prior arrangement, and no guarantees are provided. In datagram switching, each data packet must contain complete address information, since packets are routed individually. The packets may be delivered along different paths and without any guarantees, according to a best-effort policy.

Connectionless protocols are usually described as stateless because the end points have no protocol-defined way to remember where they are in a "conversation" of message exchanges. Because they can keep track of a conversation, connection-oriented protocols are sometimes described as stateful.

Examples of connection-oriented packet mode communication, i.e. virtual circuit mode communication:

- The Transmission Control Protocol (TCP) is a connection-oriented reliable protocol that is based on a datagram protocol (the IP protocol).
- X.25 was a connection-oriented reliable network protocol.
- Frame relay is a connection-oriented unreliable data link layer protocol.
- GPRS
- Asynchronous Transfer Mode
- Multiprotocol Label Switching

See also

- Packet switching
- Statistical multiplexing
- Connectionless protocol
- Connectionless mode transmission
- Packet

Exhibit 1

- Virtual circuit

Retrieved from "http://en.wikipedia.org/wiki/Connection-oriented"
Category: Computer networking